IN THE CLAIMS:

Please amend the claims as follows:

1. (previously presented) A method for image processing, in which the number of bits is limited in an encoded bit string of a pixel comprising:

- searching for a prediction value corresponding to said pixel;
- after the prediction value has been found, determining the difference between the pixel and the prediction value, to select the method for encoding said pixel;
- encoding a code word to the encoded bit string to indicate the selected encoding method; and
- encoding the pixel into the encoded bit string so that the encoded bit string has a restricted number of bits that is fixed for substantially all of encoded pixels in the image.

2. (original) The method according to claim 1, wherein the code word to indicate the selected encoding method is of variable length.

3. (original) The method according to claim 1, wherein quantizing is used to encode the bit string, wherein first a limit value is determined, wherein said difference is compared with said limit value in such a way that when the difference is smaller, said difference is quantized in the encoding of the bit string, whereas when the difference is greater, the original value of the pixel is quantized in the encoding of the bit string.

4. (original) The method according to claim 3, wherein said code word is determined on the basis of the original and limited number of bits in the pixel in such a way that the code word length does not exceed N – (M – 1) where M corresponds to the limited number of bits and N corresponds to the original number of bits.

5. (original) The method according to claim 4, wherein said code word is determined on the basis of the original and limited number of bits in the pixel in such a way that the

code word length is two when the change is less than 32 bits, and that the code word length is three when the change is more than 31 and less than 128 bits, wherein when the change exceeds 128 bits, the code word length is selected to be one, wherein the encoding method is changed.

6. (previously presented) The method according to claim 1, wherein the encoding method to be used is selected between differential pulse code modulation and pulse code modulation coding in such a way that code word lengths greater than one indicate the use of differential pulse code modulation coding, wherein the code word length of one indicates the use of pulse code modulation coding.

7. (previously presented) The method according to claim 1, wherein the encoding method to be used is selected between ordinary differential pulse code modulation coding and smart differential pulse code modulation coding in such a way that code word lengths greater than one indicate the use of differential pulse code modulation coding, wherein the code word length of one indicates the use of smart differential pulse code modulation coding.

8. (original) The method according to claim 1, wherein said prediction value is the value of one encoded pixel value or the average of several encoded pixel values.

9. (original) The method according to claim 1, wherein in the absence of a prediction value, the bit number is limited by quantizing said pixel.

10. (original) The method according to claim 1, wherein in the method, the bit string is decoded by using a decoding method corresponding to the used encoding method.

11. (original) The method according to claim 1, wherein the pixel is encoded for transfer between a camera module and an electronic device.

12. (currently amended) An image processing system which is configured to process an image with a limited number of bits in an encoded bit string of a pixel, comprising:

an encoder for encoding the pixel to the limited number of bits,

- a prediction module for searching for a prediction value corresponding to the pixel; and
- a difference module configured so that after the prediction value has been found, the difference between the pixel and the prediction value is determined,

  wherein the encoder is arranged to encode said pixel by an encoding method indicated by the difference as well as to encode, in the encoded bit string, a code word to indicate the encoding method indicated by the difference; and
- wherein the encoder is configured so that the encoded bit string has a restricted number of bits that is fixed for substantially all of the encoded pixels in the image.

13. (original) The system according to claim 12, wherein in the absence of a prediction value, the system is arranged to quantize the value of said pixel.

14. (previously presented) The system according to claim 12, wherein the system is also configured for determining a limit value, wherein the system is also arranged to compare said difference with said limit value in such a way that when the difference is smaller, the system is arranged to quantize said difference, whereas when the difference is greater, the system is arranged to quantize the original value of the pixel.

15. (original) The system according to claim 14, wherein the system is arranged to determine said code word on the basis of the original and limited number of bits in the pixel in such a way that the code word length does not exceed $N - (M - 1)$ where M corresponds to the limited number of bits and N corresponds to the original number of bits.

16. (previously presented) The system according to claim 15, wherein the system is also configured for forming the length of the code word on the basis of the original and limited number of bits in the pixel in such a way that the code word length is two when the change is less than 32 bits, and that the code word length is three when the change is more than 31 and less than 128 bits, wherein when the change exceeds 128 bits, the code word length is one, to change the encoding method.

17. (previously presented) The system according to claim 12, wherein the system also comprises a differential pulse code modulation codec and a pulse code modulation codec, wherein code word lengths greater than one indicate the use of the differential pulse code modulation codec, wherein the code word length of one indicates the use of the pulse code modulation codec.

18. (previously presented) The system according to claim 12, wherein the system also comprises an ordinary differential pulse code modulation codec and a smart differential pulse code modulation codec, wherein code word lengths greater than one indicate the use of the differential pulse code modulation codec, wherein the code word length of one indicates the use of the smart differential pulse code modulation codec.

19. (original) The system according to claim 12, wherein said prediction value is the value of one encoded pixel value or the average of several encoded pixel values.

20. (original) The system according to claim 12, wherein the system also comprises means for decoding the bit string to correspond to the encoding.

21. (original) The system according to claim 12, wherein the system also comprises a camera module and an electronic device.

22. (original) The system according to claim 21, wherein the electronic device comprises means for performing mobile communication.

23. (previously presented) A device for image processing, which device is configured to process an image with a limited number of bits in an encoded bit string of a pixel comprising an encoder for encoding the pixel to the limited number of bits, wherein the device is further configured:

- for searching for a prediction value corresponding to the pixel;
- for determining the difference between the pixel and the prediction value, wherein the encoder is arranged to encode said pixel by the encoding method indicated by the difference as well as to encode, in the encoded bit string, a code word to indicate the encoding method indicated by the difference; and
- for encoding the pixel into the encoded bit string so that the encoded bit string has a restricted number of bits that is fixed for substantially all of the encoded pixels in the image.

24. (previously presented) The device according to claim 23, wherein the device also comprises a quantizer for quantizing said pixel, and for quantizing the value of the original pixel in the absence of a prediction value.

25. (previously presented) The device according to claim 23, wherein the device is also configured for determining a limit value, wherein the device is also arranged to compare said difference with said limit value in such a way that when the difference is smaller, the device is arranged to quantize said difference, whereas when the difference is greater, the device is arranged to quantize the original value of the pixel.

26. (previously presented) The device according to claim 23, wherein the device is also configured for decoding the bit string in the way indicated by the code word.

27. (original) The device according to claim 23, wherein the device also comprises a camera module.

28. (previously presented) The device according to claim 27, wherein the device also comprises a transceiver for performing mobile communication.

29. (previously presented) The device according to claim 23, wherein the device also comprises a transceiver for performing mobile communication

30. (previously presented) A readable storage for storing software instructions for image processing with a limited number of bits in an encoded bit string of a pixel, as well as for encoding the pixel to the limited number of bits where said software instructions are executed by a processor:

- for searching for a prediction value corresponding to the pixel;
- for determining the difference between the pixel and the prediction value and for encoding the pixel by the encoding method indicated in the difference, as well as for encoding, in the encoded bit string, the code word indicating the encoding method indicated by the difference; and
- for encoding the pixel into the encoded bit string so that the encoded bit string has a restricted number of bits that is fixed for substantially all of the encoded pixels in an image.

31. (previously presented) A camera module for image processing, which camera module is fitted to process an image with a limited number of bits in an encoded bit string of a pixel comprising: -

- an encoder for encoding the pixel to the limited number of bits,
- a search module for searching for a prediction value corresponding to the pixel;
- the camera module is configured to determine the difference between the pixel and the prediction value, wherein the encoder is arranged to encode said pixel by the encoding method indicated by the difference as well as to encode, in the encoded bit string, a code word to indicate the encoding method indicated by the difference; and

- for encoding the pixel into the encoded bit string so that the encoded bit string has a restricted number of bits that is fixed for substantially all of the encoded pixels in the image.

32. (previously presented) A circuit for image processing, which circuit comprises an encoder and a decoder, which encoder is arranged to process an image with a limited number of bits in an encoded bit string of a pixel, wherein the encoder is arranged to encode the pixel to the limited number of bits, wherein:

- the encoder comprises a storage for storing at least one decoded pixel as a prediction value, wherein the encoder is arranged to retrieve the prediction value corresponding to the pixel from said storage;
- the encoder configured for determining the difference between the pixel and the prediction value, wherein the encoder is arranged to encode said pixel by the encoding method indicated by the difference as well as to encode, in the encoded bit string, also a code word to indicate the encoding method indicated by the difference; and
- configured for encoding the pixel into the encoded bit string so that the encoded bit string has a restricted number of bits that is fixed for substantially all of the encoded pixels in the image.

33. (original) The circuit according to claim 32, wherein in the absence of a prediction value, the encoder is arranged to quantize the value of said pixel.

34. (previously presented) The circuit according to claim 32, wherein the encoding method to be used is differential pulse code modulation or pulse code modulation coding.

35. (previously presented) The circuit according to claim 32, wherein the encoding method to be used is ordinary differential pulse code modulation coding or smart differential pulse code modulation coding.

36. (original) The circuit according to claim 32, wherein the decoder is arranged to decode the bit string by a decoding method corresponding to the encoding method used.

37. (previously presented) A device for image processing, comprising: a decoder which is arranged to process an image with a limited number of bits in the bit string of a pixel, which decoder is also arranged to decode the pixel to its original number of bits, wherein the decoder is arranged to recognize the code word from said bit string and to decode said pixel by the encoding method indicated in the code word, wherein the decoder comprises a memory for storing at least one decoded pixel as a prediction value, wherein the decoder is arranged to retrieve the prediction value corresponding to the pixel from said memory.

38. (previously presented) A device for image processing, which device is configured to process an image with a limited number of bits in an encoded bit string of a pixel, comprising:

- means for encoding the pixel to the limited number of bits,
- means for searching for a prediction value corresponding to the pixel;
- means for determining the difference between the pixel and the prediction value, wherein the means for encoding is arranged to encode said pixel by the encoding method indicated by the difference as well as to encode, in the encoded bit string, a code word to indicate the encoding method indicated by the difference; and
- means for using a restricted number of bits in the encoded bit string that is fixed for substantially all of the encoded pixels in the image.